



SEPTEMBER 2015

INFORMATION PROCESSING

Instructions to candidates:

- a) Time allowed: Three hours (plus an extra ten minutes' reading time at the start – do not write anything during this time)
- b) Answer any FIVE questions
- c) All questions carry equal marks. Marks for each question are shown in []
- d) Mark allocations should determine the length and depth of your answer and the time you spend on it. A part question carrying 4 marks normally requires 4 different and valid points
- e) In definitions, do not use the word being defined in your definition, e.g. avoid the word SERIAL when defining SERIAL FILE
- f) Ensure that you pay particular attention to words underlined, in CAPITALS or in **bold**. FEW OR NO MARKS will be awarded to any question where these are ignored
- g) No computer equipment, books or notes may be used in this examination

- 1. a) Distinguish carefully between the terms validation and verification. [4]
- b) State fully the purpose of validation. [4]
- c) When a new employee joins a company, a record is placed on the employee file. Some of the fields are:

Fieldname	Datatype	Typical data
Surname	Character (20)	Smith
EmployeeID	Integer	12345
AnnualSalary	Real	12345.00
JobTitle	Character (20)	Warehouse clerk
DateOfBirth	Date	19.12.1972
EmploymentDate	Date	5.3.2007

Consider EACH FIELD IN TURN and identify the validation that can be performed by the data input program on that field. [12]

- 2. a) There can be many possible causes for hardware failure. Give FIVE examples, and state ways of minimising or eliminating EACH. [10]
- b) There are also many causes of data loss other than hardware failure. State FIVE examples and again explain ways of minimising or eliminating EACH. [10]
- 3. There continues to be increasing concerns around the issue of data privacy in the online world. What steps can any company take to ensure data privacy and what legislation has been passed by Government to try to ensure privacy of data? [20]
- 4. This question relates to the batch processing method of data processing.
 - a) Describe the stages involved in preparing a batch of transactions for a sequential file update.
 - b) Identify the basic file processing activities.
 - c) Distinguish between batch processing and transaction processing.
 - d) Distinguish between online processing and real time processing. [5 each]
- 5. Printing technology has changed drastically over the last few years. Briefly outline the major developments from typewriter through to the latest colour laser printers, giving specific examples of types of printers. [20]
- 6. A large company both manufactures and retails a wide range of ladies clothes. Name FOUR different methods of data capture devices that this company may use and in EACH case state the particular use for that data capture method. [5 each]

7. a) You have been asked by your employer to write a brief report on the advantages and disadvantages of buying a special purpose software system versus a general software system. Distinguish between the two and give examples how either system could have its limitations. [10]
- b) Name a particular operating system. Describe FIVE major features the operating system provides. Your choices must be significantly different from each other. [10]
8. Assume that you work for a company called Computing Made Simple, which provides small to medium-sized companies with computer supply and maintenance services. Your director has asked you to put together a presentation to be delivered to a small group of potential customers at a local Chamber of Commerce meeting. The aim is to show the various services your company may offer customers and their staff. Explain how the computer could be used to assist in this presentation, using visual images, graphical effects and bullet points displaying them on a large screen connected to your laptop. Explain what software you will use and how the presentation is put together. [20]